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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/684,622	10/14/2003	Christopher E.J. Reid	45896.0024	3738

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EXAMINER

FISCHMANN, BRYAN R

ART UNIT PAPER NUMBER

3618

DATE MAILED: 04/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/684,622

Applicant(s)

REID ET AL.

Examiner

Bryan Fischmann

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 20 August 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 29,31-33,38-43 and 46-52 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 29,31-33,38-43 and 46-52 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 October 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>08-20-04</u> .  | 6) <input type="checkbox"/> Other: _____                                    |

### ***Acknowledgements***

1. The Preliminary Amendments filed 10-14-2003 and 12-19-2003 have been entered.

### ***Interference***

2. The Request for Interference filed 12-19-2003, as part of the amendment of the same date, has been noted. Note that one of the many requirements for an Interference is that the Applicant present claims with allowable subject matter. Since this is not the case, as set forth below, the Request for Interference is denied.

### ***Specification***

3. The abstract of the disclosure is objected to because of the following:
  - A) The abstract uses legal terms such as "comprising" (see MPEP 608.01(b)).
4. The disclosure is objected to because of the following:
  - A) The Preliminary Amendment dated 10-14-2003 amended page 1, line 1 to add the title "RELATED APPLICATIONS". This additional title is objected to, as the title is not a "recognized title" per Section 608 of the MPEP.

Also, Applicant should modify the line below this title on the Preliminary Amendment dated 10-14-2003 to indicate that US Patent Application 09/785,878 has been abandoned.

- B) The following recited phrases are unclear, awkwardly worded, and/or grammatically incorrect:

1) The meaning of "Genset" recited on line 6 of page 10 is considered unclear.

C) The following inconsistencies in nomenclature were noted:

1) Lines 1 and 2 of page 13 recites "end panel 36". Line 5 of page 13 recites "housing panel 36".

### ***Drawings***

5. Figures 1a and 1b should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g).

6. It unclear why both the top and bottom faces of the battery on Figure 1b are labeled with the reference number 16. Reference number 16 was defined as "top face" in the specification.

7. Figure 6 is objected to, as being too "light". Note in particular, for example, that the lines connecting reference numbers 70 and 72 are barely visible.

Figure 6 is also objected to, as reference number 68 is associated with the term "fuel processor". Note that page 15 of the specification associates reference number 15 with the term "reformer".

8. Figure 11 is objected to, as it is not clear why reference number 44 is circled when all other reference numbers in this figure, as well as other figures are not circled.

9. Figure 12 is objected to, as many of the words and reference characters are too small to be clearly readable. Note that per 37 CFR 1.84 that numbers, letters and reference characters must be at least .32cm (1/8") in height.

10. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign not mentioned in the description: I-FC (Figure 6), 75 (Figure 7), MeOH, Q, J0-J7, CO (Figure 12). Correction is required.

11. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the following must be shown or the features canceled from the claims. No new matter should be entered.

Claims 29, 46 and 48 – the power control module disposed within said housing and coupled to said battery and said electrical power generator and arranged to supply power to the host machine from either said battery or said generator

Claims 38 and 39 – the method set forth

Note that the drawing objection to claims 38 and 39 will be withdrawn if the Applicant does not dispute the assertion by the Examiner, as set forth in more detail later in this Office Action, that the method is obvious in light of the apparatus.

Claim 42 – the scissor type lifting mechanism

Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheets should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Objections***

12. Claims 39 and 47 are objected to because of the following:

A) It is believed that wording would be improved if the word "of" were added after the word "steps" on line 2 of claim 39.

B) Claim 47 is objected to, as claim 47 is dependant upon canceled claim 1. For purposes of examination, it will be assumed claim 47 is dependant upon claim 46.

***Claim Rejections - 35 USC § 112***

13. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

14. Claims 29, 30-33, 42 and 46-52 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention.

A) Claim 29 recites "...a power control module disposed within said housing and coupled to said battery and said electrical power generator and arranged to supply power to the host machine from either said battery or said generator".

As best understood, the "power control module" is reference number 70. As best understood from the original disclosure (see particularly Figure 6) of this application and the parent application 09/785,878, the power control module does not supply power to a host machine, best understood to be reference number 67, as recited above. Instead,

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power is supplied to the host machine from either battery 64, or DC/DC power converter 62 and fuel cell 60 via DC bus 66. Accordingly, the above recitation is considered to be new matter.

Per Section 2163.06 of the MPEP, new matter in the claims should be rejected under 35 USC 112 first paragraph, written description requirement.

See claims 46 and 48 for a similar recitation.

B) Similar to subparagraph "A" above, the Examiner cannot find support for the "scissor type lifting mechanism", as recited in claim 42, in the original disclosure.

### ***Claim Rejections - 35 USC § 102***

15. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical

Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

16. Claims 29, 31-33, 38-43 and 46-52 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Harris, et al, US Patent Application Publication 2001/0054233.

Note that in the amendment "Remarks" section dated 12-19-2003 that Applicant admits that the above claims were "copied" from US Patent Application 09/827,173. Note also that above US Patent Application Publication is published from the same US application. Further note that paragraph 0001 of US Patent Application Publication 2001/0054233 claims domestic priority to US Provisional Application 60/197,391, filed 04-14-2000.

### ***Claim Rejections - 35 USC § 103***

17. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

18. Claims 38 and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over EVC No. 8305 (citation 3 of page 3 of the IDS dated 08-20-2004).



EVC No. 8305 teaches a method (see comments below) of replacing a battery (page 1) in an electric powered machine (fork lift truck) with a rapidly renewable power source (fuel cell – page 1).

EVC No. 8305 fails to explicitly state that the above method includes the steps of; uncoupling the battery from the machine, removing the battery from the battery compartment of the machine, placing a rapidly renewable power source in the battery compartment; and coupling the rapidly renewable power source to the machine.

However, EVC No. 8305 does teach on page 1 that a fuel cell power package is being developed to replace the conventional batteries on a fork-lift truck. In order to do this, the existing battery on a fork-lift truck would have to be electrically uncoupled and removed from a battery compartment of a fork-lift truck and the fuel cell power package installed in place of the removed battery and electrically coupled to the fork-lift truck.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the above steps in the method of EVC No. 8305.

Regarding the method of recited in claims 38 and 39, it is the Examiner's position that it would have been obvious to one having ordinary skill in the art at the time the invention was made to include the claimed method. Because the prior art discloses all the structure necessary to perform the claimed functions, one of ordinary skill in the art would find the claimed method to be an obvious step in light of the disclosed structure. See MPEP §2112.02. See also *In re King*, 801 F2d 1324, 1326; 231 USPQ 136, 138 (Fed Cir 1986).

19. Claims 40 and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over EVC No. 8305 (citation 3 of page 3 of the IDS dated 08-20-2004), in view of DE 19641254.

EVC No. 8305 teaches an electric vehicle having a peak power requirement, comprising:

a power source (power package – page 1) electrically coupled to the electric vehicle, said power source comprising:

a battery (page 1), said battery sized to supply the peak power requirement of the host machine (page 1),

a power control module (control system - page 4, column 1) and coupled (electrically) to said battery, and an electrical power generator (fuel cell – page 1) and coupled (electrically) to said power control module, said electrical power generator sized to supply less than the peak power requirement of the electric vehicle (page 1).

EVC No. 8305 fails to explicitly teach a housing for the power source, or that the power control module is installed within a housing.

However, note that page 1 teaches that the fuel cell and battery power source or “package” of EVC No. 8305 is designed to replace a traditional battery in a fork-lift truck. Note that unless each component of the power source of EVC No. 8305 were installed separately, a housing would be required. Note also that the recitation of “a compact power package” on page 1 of EVC No. 8305 implies that a housing is present. DE 19641254 teaches a housing (Figures 4 and 5) that allows replacement of a battery power unit (Figure 4) with a “hybrid power unit” (Figure 5), including a power control

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module (25). A housing with an "integral" power control module for a power source of an electric vehicle is advantageous in that a fuel cell and battery power source may be easily exchanged for an "all electric source".

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to enclose the power source of EVC No. 8305, including the power control module, within a housing, as taught by DE 19641254.

20. Claims 40 and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over EVC No. 8305 (citation 3 of page 3 of the IDS dated 08-20-2004) and DE 19641254, as applied to claim 40, and further in view of Dammeyer, et al, US Patent 5,738,187.

The combination fork-lift electric vehicle of EVC No. 8305 fails to teach the details of the lifting mechanism of the fork-lift.

However, Dammeyer teaches a fork lift comprising a scissor type lifting mechanism (Figure 1). A scissor type lifting mechanism is advantageous in that the lifting mechanism facilitates the lifting of loads.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made that the combination fork lift electric vehicle of EVC No. 8305 include a scissor type lifting mechanism, as taught by Dammeyer.

### ***Conclusion***

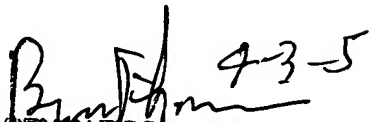
21. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

A) Leifert – teaches a fork-lift truck powered by a fuel cell

22. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Bryan Fischmann whose telephone number is (703) 306-5955. The examiner can normally be reached on Monday through Friday from 9:00 to 5:30. On, or about 04-06-2005, the Examiner's new phone number will be (571)272-6694.

If attempts to reach the Examiner by telephone are unsuccessful, the examiner's supervisor, Chris Ellis, can be reached on (703) 308-2560. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
BRYAN FISCHMANN  
PRIMARY EXAMINER